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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,331	07/19/2001	Georgios Karagiannis	34648-00453	9624

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ERICSSON INC.  
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EXAMINER
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SHIN, KYUNG H

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/909,331

Applicant(s)

KARAGIANNIS, GEORGIOS

Examiner

Kyung H. Shin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 February 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 50-76 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 50-76 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. This action is responding to application filed 7/19/2001 and amended 2/11/2005.
2. Claims **50 - 76** are pending. Claims **1 - 49** have been canceled. Independent claims are **50, 64, 71**.
3. The text of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejection - 35 USC § 103***

4. Claims **50 - 59, 64 - 70** are rejected under 35 U.S.C. 103(a) as being unpatentable over Marchand (US Patent No. 6,714,515) in view of Chen (US Patent No. 6,487,170).

**Regarding Claims 50 (New), 64 (New)**, Marchand discloses a method of providing dynamic quality of service (QoS) in an Internet Protocol (IP) network that uses Resource Reservation Protocol (RSVP) aggregation and includes a region using an Integrated Services (Intserv) architecture connected to a region using a Differentiated Services (Diffserv) architecture, said Intserv region including an edge router and said

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Diffserv region including a border router and a core router, said method comprising the steps of:

- a) interfacing a bandwidth broker with the edge router in the Intserv region and the border router in the Diffserv region, said bandwidth broker communicating directly with the border router without communicating with the core router in the Diffserv region; (see Marchand col. 5, lines 18-25; col. 6, lines 46-48; col. 5, lines 41-44; col. 5, line 65 - col. 6, line 6: bandwidth broker controls processing of resource allocation, services regions (i.e. Intserv and Diffserv))
- b) providing Intserv to Diffserv Interoperability by the edge router in the Intserv region and the bandwidth broker, by preventing the border router and the core router in the Diffserv region from processing RSVP messages; (see Marchand col. 5, lines 41-44; col. 5, line 65 - col. 6, line 6: services (i.e. Intserv and Diffserv) regions, bandwidth broker controls processing of resource allocation)
- d) managing dynamic provisioning of QoS in the Diffserv region using the bandwidth broker. (see Marchand col. 6, lines 56-62; col. 5, line 65 - col. 6, line 6: QoS, Diffserv)
- c) Marchand discloses a bandwidth broker controlling reservation messaging utilizing RSVP protocol. (see Marchand col. 4, lines 7-12; col. 5, line 65 - col. 6, line 6: bandwidth broker controls resource reservations, RSVP) Marchand does not disclose aggregation reservation messaging. However, Chen discloses storage and management of aggregation states in the bandwidth broker using

aggregation protocol; (see Chen col. 6, lines 41-44; col. 6, lines 11-16: bandwidth broker, aggregation reservation messaging)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to utilize aggregation messaging in the reservation of resources as taught by Chen. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20: “ ... *intelligent mechanism for implementing admission control policy in a DiffServ network ... increase the bandwidth utilization for premium service beyond that provided by the weakest link ...* ”)

**Regarding Claim 51 (New)**, Marchand discloses the step of managing dynamic provisioning of QoS includes obtaining by the bandwidth broker, resource availability information, wherein the bandwidth broker communicates only with the border router in the Diffserv region to the exclusion of the core router. (see Marchand col. 5, lines 18-25 col. 6, lines 56-62 ;col. 5, line 65 - col. 6, line 6: bandwidth broker, QoS, Diffserv region) Marchand does not disclose an aggregator and deaggregator functionality. However, Chen discloses the method of claim 50, wherein the bandwidth broker has an aggregator and deaggregator functionality. (see Chen col. 6, lines 41-44; col. 6, lines 11-16: bandwidth broker, aggregation reservation messaging)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to utilize resource aggregation messaging to reserve resources as taught by Chen. One of ordinary skill in the art would be

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motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20)

**Regarding Claim 52 (New)**, Marchand discloses the method of claim 51, further comprising using a plurality of bandwidth brokers that interact by using RSVP aggregation. (see Marchand col. 7, lines 12-13; col. 5, line 65 - col. 6, line 6: multiple bandwidth brokers, RSVP)

**Regarding Claims 53 (New), 65 (New)**, Chen discloses the method of claims 51, 64, further comprising the steps of:

- a) determining by the bandwidth broker, whether reserved resources in the Diffserv region are to be released in a next refreshment period; (see Chen col. 6, lines 41-44; col. 13, lines 7-10: bandwidth broker, reservation refresh)
- b) upon determining that the reserved resources are not to be released in the next refreshment period, refreshing the reservation of the resources by the bandwidth broker; (see Chen col. 6, lines 41-44; col. 11, lines 24-27: bandwidth broker, reservation refresh) and
- c) upon determining that the reserved resources are to be released in the next refreshment period, allowing the reservation of the resources to lapse by the bandwidth broker. (see Chen col. 6, lines 41-44; col. 11, lines 24-27: bandwidth broker, expired (i.e. lapsed) bandwidth values are processed)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to utilize refresh capabilities reserving resources as taught by Chen. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20)

**Regarding Claims 54 (New), 66 (New),** Marchand discloses the step of the allocation of resources in the Diffserv region is performed by the bandwidth broker in combination with the border router in the Diffserv region. (see Marchand col. 4, lines 7-12; col. 5, line 65 - col. 6, line 6: bandwidth broker, resource allocation, Diffserv region) Marchand does not disclose refresh capabilities in resource reservation. However, Chen discloses the method of claims 53, 65, wherein refreshing reservation of resources. (see Chen col. 6, lines 41-44; col. 13, lines 7-10: bandwidth broker, reservation refresh)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to utilize refresh capabilities in the reservation of resources as taught by Chen. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20)

**Regarding Claims 55 (New), 68 (New),** Marchand discloses a bandwidth broker utilizing RSVP protocols. (see Marchand col. 5, lines 18-25; col. 5, line 65 - col. 6, line 6: bandwidth broker, RSVP) Marchand does not disclose aggregation messaging in resource reservation. However, Chen discloses the method of claims 50, 64, wherein

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the step of storing and managing aggregation states in the bandwidth broker includes selectively resizing an aggregated state pursuant to a new endtoend RSVP request. (see Chen col. 11, lines 46-54; col. 10, lines 47-54; col. 8, lines 35-43: bandwidth requests modified (i.e. aggregated), stored, end-to-end RSVP request)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to enable the management and storage of aggregation reservation as taught by Chen. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20)

**Regarding Claim 56 (New)**, Marchand discloses the method of claim 50, further comprising managing by the border router in the Diffserv region, resource availability and admission control to the core router using the Load Control protocol. (see Marchand col. 5, lines 50-55: resource availability and admission control capabilities)

**Regarding Claim 57 (New)**, Marchand discloses a bandwidth broker utilizing RSVP protocols. (see Marchand col. 5, lines 18-25; col. 5, line 65 - col. 6, line 6: bandwidth broker, RSVP) Marchand does not disclose storage of total amount of reserved resources. However, Chen discloses the method of claim 56, wherein the border router contains a reservation state that stores a total amount: of resources which were reserved by the Load Control protocol. (see Chen col. 10, lines 47-54: reservation information stored)



It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to enable the storage of reservation information as taught by Chen. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20)

**Regarding Claims 58 (New), 67 (New),** Chen discloses the method of claims 57, 65, wherein the bandwidth broker is a bandwidth broker aggregator, and the method includes updating the reservation state if the bandwidth broker aggregator requests modification of the reservation state, or if resource conditions in the Diffserv region, including the core router, suddenly change. (see Chen col. 6, lines 41-44; col. 11, lines 24-27; col. 11, lines 46-54: bandwidth broker, modifications to resource reservation information)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to process modifications to resource reservation information as taught by Chen. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20)

**Regarding Claims 59 (New), 69 (New),** Marchand discloses the method of claims 50, 64, wherein the step of interfacing the bandwidth broker with the edge router in the Intserv region and the border router in the Diffserv region includes communicating with

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the bandwidth broker using a protocol selected from the Common Open Policy Services (COPS) protocol and the Simple Network Management Protocol (SNMP). (see Marchand col. 5, lines 18-25; col. 5, line 65 - col. 6, line 6; col. 7, lines 50-55: bandwidth broker, COPS, network management protocol (i.e. SNMP))

**Regarding Claim 70 (New)**, Chen discloses the bandwidth broker of claim 64, wherein the bandwidth broker is a bandwidth broker aggregator and the second bandwidth broker is a bandwidth broker deaggregator. (see Chen col. 6, lines 41-44; col. 5, lines 11-16: bandwidth broker, aggregator/deaggregator reservation messaging)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to enable aggregate and deaggregate reservation capabilities as taught by Chen. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20)

**5. Claims 60 - 63, 71 - 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marchand-Chen as applied to claim 50 above, and further in view of Shaio et al. (US Patent No. 6,625,156).**

**Regarding Claim 60 (New)**, Marchand discloses the Diffserv region includes a plurality of border routers and core routers, and the step of providing IntservtoDiffserv interoperability by the edge router in the Intserv region and the bandwidth broker

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includes preventing the border routers and the core routers. In the Diffserv region from processing RSVP messages by using IP messaging to prevent border routers and core routers that are RSVP aware from processing RSVP messages. (see Marchand col. 5, lines 19-25; col. 5, line 65 - col. 6, line 6; col. 5, lines 41-44: bandwidth broker, RSVP, Intserv, Diffserv) Marchand does not disclose control message tunneling capabilities. However, Shaio discloses the method of claim 50, wherein tunneling is enabled for control messaging. (see Shaio col. 9, lines 43-51; col. 11, lines 23-30: control message tunneling)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to utilize a tunneling mechanism for control messages as taught by Shaio. One of ordinary skill in the art would be motivated to employ Shaio in order to optimize data flow over a network communications path. (see Shaio col. 1, lines 55-60: "*... provide mechanisms for "shortcutting" some of the hops along a routed path ... between ingress and egress points ... diverting a data flow over the shortcut ...*")

**Regarding Claim 61 (New)**, Marchand discloses the bandwidth broker includes the step of providing IntservtoDiffserv interoperability includes RSVP messages between the bandwidth brokers to prevent border routers and core routers In the Diffserv region that are RSVP aware from processing RSVP messages. (see Marchand col. 5, lines 19-25; col. 5, line 65 - col. 6, line 6; col. 5, lines 41-44: bandwidth broker, RSVP, services (i.e. Intserv, Diffserv) regions) Marchand does not disclose aggregation

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reservation messaging or control message tunneling. However, Chen discloses the method of claim 60, wherein messages are transferred between the bandwidth broker aggregator and the bandwidth broker deaggregator. (see Chen col. 6, lines 41-44; col. 5, lines 11-16: bandwidth broker, aggregation reservation), and Shaio discloses control message tunneling between bandwidth brokers. (see Shaio col. 9, lines 43-51; col. 11, lines 23-30: control messaging tunneling)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to aggregate reservation capabilities as taught by Chen, and to enable tunneling for control messages as taught by Shaio. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20), and to employ Shaio in order to optimize data flow over a network communications path. (see Shaio col. 1, lines 55-60)

**Regarding Claim 62 (New)**, Marchand discloses the edge router in the Intserv region sends the RSVP messaging directly to either the bandwidth broker. (see Marchand col. 5, lines 19-25; col. 5, line 65 - col. 6, line 6; col. 5, lines 41-44: bandwidth broker, RSVP, Intserv) Marchand does not disclose aggregation reservation messaging or control message tunneling. However, Chen discloses the method of claim 61, wherein sending the messages directly to either the bandwidth broker aggregator or the bandwidth broker deaggregator. (see Chen col. 6, lines 41-44; col. 5, lines 18-25: bandwidth broker, aggregation reservation), and Shaio discloses messages are tunneled between

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the bandwidth brokers. (see Shaio col. 9, lines 43-51; col. 11, lines 23-30: control messaging tunneling)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to aggregate reservation capabilities as taught by Chen, and to enable tunneling for control messages as taught by Shaio. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20), and to employ Shaio in order to optimize data flow over a network communications path. (see Shaio col. 1, lines 55-60)

**Regarding Claim 63 (New),** Marchand discloses the edge router in the Intserv region sends the RSVP messages to a first border router in the Diffserv region that is capable of communicating with the edge router and the bandwidth broker, and the border router forwards the RSVP messages to the bandwidth brokers. (see Marchand col. 5, lines 19-25; col. 5, line 65 - col. 6, line 6; col. 5, lines 41-44: bandwidth broker, RSVP, Diffserv) Marchand does not disclose aggregation reservation messaging or control message tunneling. However, Chen discloses the method of claim 60, wherein the messages are tunneled between the bandwidth broker aggregator and the bandwidth broker deaggregator. (see Chen col. 6, lines 41-44; col. 5, lines 18-25: bandwidth broker, aggregation reservation), and Shaio discloses messages are tunneled between the bandwidth brokers. (see Shaio col. 9, lines 43-51; col. 11, lines 23-30: control message tunneling)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to aggregate reservation capabilities as taught by Chen, and to enable tunneling for control messages as taught by Shaio. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20), and to employ Shaio in order to optimize data flow over a network communications path. (see Shaio col. 1, lines 55-60)

**Regarding Claim 71 (New)**, Marchand discloses a network subsystem for providing dynamic quality of service (QoS) in an Internet Protocol (IP) network that uses Resource Reservation Protocol (RSVP) aggregation and includes a region using an Integrated Services (Intserv) architecture connected to a region using a Differentiated Services (Diffserv) architecture, said network subsystem comprising:

- a) an edge router in the Intserv region; (see Marchand col. 5, lines 41-44; col. 7, lines 18-20: integrated services (i.e. Intserv) region, edge router)
- b) a border router and a core router in the Diffserv region; (see Marchand col. 5, line 65 - col. 6, line 6: Diffserv services region) and
- c) a bandwidth broker that interfaces the edge router in the Intserv region with the border router in the Diffserv region, said bandwidth broker comprising:
  - i) means for communicating directly with the border router in the Diffserv region without communicating with the core router in the Diffserv region;

(see Marchand col. 4, lines 7-12; col. 5, lines 18-25: bandwidth broker controls resource allocation)

- iv) means for managing dynamic provisioning of QoS in the Diffserv region. (see Marchand col. 5, line 65 - col. 6, line 6; col. 6, lines 56-62: Diffserv, QoS)
- ii) Shaio discloses means for tunneling RSVP messages to a second bandwidth broker, thereby preventing the border router and the core router in the Diffserv region from processing the RSVP messages; (see Shaio col. 9, lines 43-51; col. 11, lines 23-30: control message tunneling)
- iii) Chen discloses means for storing and managing RSVP aggregation states using the RSVP aggregation protocol; (see Chen col. 5, lines 11-16: aggregation reservation)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to aggregate reservation capabilities as taught by Chen, and to enable tunneling for control messages as taught by Shaio. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20), and to employ Shaio in order to optimize data flow over a network communications path. (see Shaio col. 1, lines 55-60)

**Regarding Claim 72 (New)**, Chen discloses the bandwidth broker of claim 64, wherein the bandwidth broker is a bandwidth broker aggregator and the second bandwidth broker is a bandwidth broker deaggregator. (see Chen col. 6, lines 41-44; col. 5, lines

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11-16: bandwidth broker, aggregation reservation)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to enable resource reservation aggregation as taught by Chen. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20)

**Regarding Claim 73 (New)**, Marchand discloses wherein the edge router in the Intserv region sends the RSVP messages to a first border router in the Diffserv region that is capable of communicating with the edge router and the bandwidth broker, and the border router. (see Marchand col. 5, lines 18-25; col. 5, line 65 - col. 6, line 6: bandwidth broker, RSVP) Marchand does not disclose an aggregator or tunneling for control messaging. However, Chen disclose the method of claim 60, wherein the messages are forwarded to either the bandwidth broker aggregator or the bandwidth broker deaggregator. (see Chen col. 6, lines 41-44; col. 5, lines 11-16: bandwidth broker, aggregation reservation messaging), and Shaio discloses messages are then tunneled between the bandwidth brokers. (see Shaio col. 9, lines 43-51; col. 11, lines 23-30: control message tunneling)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to aggregate reservation capabilities as taught by Chen, and to enable tunneling for control messages as taught by Shaio. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the



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implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20), and to employ Shaio in order to optimize data flow over a network communications path. (see Shaio col. 1, lines 55-60)

**Regarding Claim 74 (New)**, Marchand discloses wherein the Diffserv region includes a plurality of border routers and core routers, and the edge router in the Intserv region sends the RSVP messages to a first border router in the Diffserv region that is capable of communicating with the edge router and the bandwidth broker, and the border router. (see Marchand col. 5, lines 18-25; col. 5, line 65 - col. 6, line 6: bandwidth broker, RSVP) Marchand does not disclose an aggregator or tunneling for control messaging. However, Chen discloses the network subsystems of claim 72, wherein it forwards the RSVP messages to either the bandwidth broker aggregator or the bandwidth broker deaggregator. (see Chen col. 6, lines 41-44; col. 5, lines 11-16: bandwidth broker, aggregation reservation messaging), and Shaio discloses messages are then tunneled between the bandwidth brokers. (see Shaio col. 9, lines 43-51; col. 11, lines 23-30: control message tunnel)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to aggregate reservation capabilities as taught by Chen, and to enable tunneling for control messages as taught by Shaio. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20), and to employ Shaio in order to optimize data flow over a network

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communications path. (see Shaio col. 1, lines 55-60)

**Regarding Claim 75 (New)**, Marchand discloses the method of claim 50, further comprising managing by the border router in the Diffserv region, resource availability and admission control to the core router using the Load Control protocol. (see Marchand col. 5, lines 50-55: resource availability, admission control)

**Regarding Claim 76 (New)**, Chen discloses the method of claim 56, wherein the border router contains a reservation state that stores a total amount of resources which were reserved by the Load Control protocol. (see Chen col. 10, lines 47-54: storage of resource reservation information)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Marchand to enable the storage of resource reservation information as taught by Chen. One of ordinary skill in the art would be motivated to employ Chen in order to optimize the implementation of admission control and bandwidth utilization. (see Chen col. 1, lines 16-20)

### **Conclusion**

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

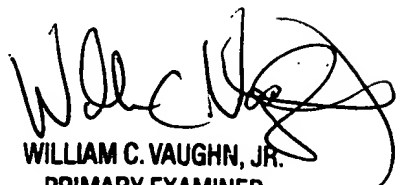
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyung H. Shin whose telephone number is (571) 272-3920. The examiner can normally be reached on 9 am - 7 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KHS  
Kyung H Shin

  
WILLIAM C. VAUGHN, JR.  
PRIMARY EXAMINER